

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

Claim Rejections-35 U.S.C. § 103(a)

The Office Action rejected claims 1-5, 9, 10 and 12-20 under 35 U.S.C. 103(a) as being unpatentable over Applicant's commonly owned issued patent (Dallas) in view of Dearing et al. Applicant respectfully disagrees.

With respect to claim 1, the Office Action rejects Applicant's argument regarding Dearing on the ground that Dallas is the primary reference and asserts that Dearing shows "it would have been obvious to one having ordinary skill in the art to modify Dallas to include at least a third coil gripping surface adapted to grip a third diameter as taught by Dearing in order reduce the run time." Applicant respectfully disagrees and requests that the Examiner reconsider this position.

The Office Action states that "Dallas does not disclose a third tubing gripping surface adapted to grip a third coil tubing string of a third diameter." Thus, in order to support the rejection, Dearing must provide a teaching not only to provide a third tubing gripping surface, but also to provide such a surface adapted to grip a third coil tubing string of a diameter different from the other two. Dearing, however, does not teach a "third coil gripping surface of a third diameter." Dearing only teaches coil gripping surfaces 142, 144 of a first and second diameter. With regard to its FIG. 11, Dearing describes in paragraph [0042]:

Another important feature of the injector assembly 22 is that the wheel 114 may have a multiplicity of grooves. As shown in FIGS. 8 and 11, the wheel 114 preferably includes first and second grooves 142 of a predetermined size. Typically, the first and second grooves 142 are of the same size and are used to propel spooled tubing strings 48, 50 of the same size into the well 28. In the alternative, the grooves 142 may be of a different size. Ideally, the wheel 114 includes additional grooves 144 of a size different than the grooves 142. This allows the spooled tubing unit 10 to run different sized tubing strings into the well 28 without replacing the wheel 114.

That is, wheel 114 is typically configured so that it has grooves 142 of the same size, but it could also be configured so that grooves 142 are of different size. In addition, the wheel may include

grooves 144. That is, there are two ways to achieve dual-size grooves in the wheel: (a) modification of the typically same-sized grooves 142 so that grooves 142 are of different size, and (b) adding grooves 144 of a size different from the size of grooves 142 (in their typical same-sized configuration). Figure 11 of Dearing illustrates the latter arrangement. Dearing does not teach or suggest a third diameter. For instance, Dearing Figure 11 shows that grooves 144 are added to the wheel in the wheel's typical configuration in which grooves 142 are of the same size, and there is nothing in Dearing to indicate otherwise. For at least this reason, Dearing would not provide a motivation to modify Dallas to include gripping blocks having at least first, second and third coil tubing gripping surfaces respectively adapted to simultaneously grip a coil tubing string of a respective first, second and third diameter. The rejection of claims 1-5 and 14-18 is thereby traversed.

In any event, claim 1 calls for gripping blocks having at least first, second and third coil tubing gripping surfaces respectively adapted to simultaneously grip a coil tubing string of a respective first, second and third diameter. As explained in Applicant's prior response, the Dearing drive would not effectively grip multiple differently-sized strings simultaneously. Thus, Dearing provides no motivation to modify Dallas to include additional gripping surfaces that could simultaneously grip coil tubing strings of different diameter.

With respect to claim 9, the Office Action further asserts that "Dearing et al. teaches that it is advantageous to run two or more spooled tubing strings into a well in order to reduce running time. It would have been obvious to make at least three independently drivable gripper chain drive systems in order to reduce running time."

However, Dearing only teaches one injector system 22, with a single injector wheel having four grooves, two (142) of a first diameter and two (144) of a second diameter. For reasons similar to those discussed above with regard to claim 1, Applicant submits that Dearing provides no motivation to modify Dallas to include three independently drivable gripper chain drive systems, each having a pair of opposed gripper chain drives and a plurality of substantially identical gripping blocks for gripping respective tubing strings of respectively different diameters. The rejection of claims 9, 10 and 12-13 is thereby traversed.

With respect to claim 19, the Office Action asserts "Dearing et al. teaches three differently-sized gripping surfaces in order to reduce running time (see page 3 paragraph [0042]). It would have been obvious to one having ordinary skill in the art at the time of the

invention to modify Dallas by including three differently-sized coil tubing strings as taught by Dearing et al. in order to insert tubing strings of different sizes into the well and reduce running time."

However, as explained above, Dearing et al. fails to teach or suggest three differently-sized gripping surfaces. Accordingly, for reasons similar to those discussed above with regard to claim 1, there is no teaching or suggestion in Dearing et al. that would lead a person skilled in the art to the invention claimed in the claims at issue. The rejection of claims 19 and 20 is thereby traversed.

Furthermore, Applicant respectfully submits that there is no motivation to one having ordinary skill in the art to modify Dallas in view of Dearing for any purpose whatsoever.

Dearing teaches a coil tubing injector that can only be used to insert coil tubing into a "dead well". The Dearing injector assembly 22 is suspended above the wellhead 28 by the mast 16 that is "raised or lowered by the winch 24 so that spooled tubing coming off the injector assembly 22 passes downwardly into the well" (page 2, paragraph [0029]). Because of this structure, the injector assembly 22 cannot support or control the coil tubing passing into the well. All control of the coil tubing is lost as soon as the coil tubing leaves the injector assembly 22, which is necessarily a considerable distance above the wellhead.

In order to inject coil tubing into a live well, a lubricator or a stuffing box is generally mounted to the top of the wellhead so that the well pressure is contained. If one were to attempt to inject coil tubing into a live well using Dearing's injector assembly, the unsupported coil tubing below the injector assembly 22 would twist and buckle due to the friction induced by the lubricator or stuffing box through which the coil tubing would be run. Furthermore, if the well pressure were greater than a weight of the coil tubing (normally the case), the coil tubing would be uncontrollably ejected from the well.

Any person of ordinary skill in the art would understand that the injector assembly 22 taught by Dearing can only be used to inject coil tubing into a dead well. Since Dallas teaches that the coil tubing injector is intended to be primarily used for injecting coil tubing through a lubricator or a stuffing box 16, a person of ordinary skill in the art would not be motivated to combine Dallas and Dearing.

Applicant therefore respectfully submits that for at least the above reasons the rejection the claims at 1-5, 9, 10, and 12-20 is traversed.

This application is therefore now considered to be in a condition for immediate allowance. Favourable reconsideration and early issuance of a Notice of Allowance are thereby requested.

Respectfully submitted,
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